UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
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17 October 2011

Mr. Chris Church
National Park Service,
Denver Service Center,
12795 W. Alameda Parkway
P.O. Box 25287
Denver, CO 80225-0287

SUBJECT: Draft Environmental Impact Statement (DEIS): Canaveral National Seashore (CNS) Project, General Management Plan (GMP), Implementation, Brevard and Volusia Counties, FL. CEQ No. 20110262, ERP No. NPS-E65093-FL

Dear Mr. Church:

To fulfill EPA's Clean Air Act (CAA) § 309 and National Environmental Policy Act (NEPA) § 102(2)(C) responsibilities, EPA reviewed the above DEIS for the proposed action: the GMP. Under § 309, EPA is directed to review and comment publicly on the environmental impacts of Federal activities, including actions for which environmental impact statements are prepared. We are giving this DEIS a "Lack of Objections" rating, see enclosed "Summary of the EPA Rating System."

Background

The CNS is managed by the National Park Service (NPS) in partnership with the National Aeronautics and Space Administration (NASA), which owns approximately 70 percent of the CNS associated with the Kennedy Space Center, and the U.S. Fish and Wildlife Service, which administers the adjacent Merritt Island National Wildlife Refuge where the NPS co-manages with US FWS approximately 34,000 acres.

***Purpose & Need*:** The plan's purpose is to decide how to best fulfill the CNS' purpose, maintain its significance, and protect its resources unimpaired for the enjoyment of present and future generations.

Due to substantially changed conditions since its 1982 inception, the GMP requires updating. The new realignment of the South District beach-access road outside the primary NASA security zone has facilitated increased visitor traffic as has the highly popular Mosquito-Lagoon boat tours. The CNS has acquired significant archeological and historic resources, e.g., the acquisition of the Seminole Rest property and thirteen retained use and life estates and the discovery of the French fleet's shipwreck survivor's camp, a product of France's 1565 attempt to establish a Florida settlement. Additionally, the historic Eldora State House has been rehabilitated and opened to the public and a research facility has been established. Furthermore, population pressures are increasing, e.g., boat wakes damaging oyster reefs, boat

anchors damaging sea-grass beds, and boat traffic decreasing angler enjoyment. Moreover, there is pressure to allow personal watercraft and provide commercial services.

Description: The proposed action, this GMP, provides guidance for the next 20 plus years on perpetuating natural systems, preserving cultural resources, and providing a quality visitor-experience opportunity. Any proposed development consistent with the proposed action would require feasibility studies, detailed planning, and environmental documentation. Additionally, GMP implementation is dependent upon available resources and consequently may occur in phases over many years.

Alternatives: This DEIS evaluated four alternatives, including the *No Action* Alternative, for managing the national seashore in context of seven management zones. Each alternative proposes a different configuration of the management zones based on its concept. The intent for every management zone is to preserve and protect natural and cultural resources to the greatest extent possible given available funds.

Concept: Alternative A (no action) - the CNPS will continue to be managed under the overall operational direction provided in its enabling legislation, previous planning documents, and existing interagency/cooperative agreements.
Concept: Alternative B (preferred action) - the CNS will be managed to preserve and enhance the natural and historic landscape features associated an eastern Florida coastal barrier island system. Emphasis will be on retaining the relatively undeveloped character and providing an uncrowded experience by dispersing visitors via a shuttle, canoe or kayak, hiking- walking and bicycle trails.
Concept: Alternative C – the CNS will be managed in a way so visitors can choose from a variety of access options to land- and water-based natural and cultural features, recreational opportunities, and educational pursuits to facilitate an in-depth understanding of the natural and cultural history of eastern coastal Florida.
Concept: Alternative D – the CNS will be managed with a focus on enhancing lands, resources, and facilities and to promote outdoor recreational and interpretive educational opportunities consistent with preservation of the natural and cultural resources.

The major differences between the four alternatives appear to be in the degree of construction and staffing. For example,

Alternative A – Deferred maintenance items ($6.24 million worth of deferred maintenance backlogged items, including about $5.2 million for roads) will be corrected over the life of this plan. A short list of minor capital improvements ($115,000) will be completed. These one-time costs amount to $10.3 million. Estimated annual operations, maintenance, and leasing costs will bring the total annual operating costs to $2.6 million.
Alternative B – the backlog of deferred maintenance will be cleared up ($6.24 million), a series of capital improvements will be implemented (26.9 million), including future planning studies ($2 million). The DEIS states this Alternative requires an additional $18.6 million more in expenditures than Alternative A,

including: an additional $0.8 million for annual operational costs, 10.5 more full time positions (an annual increase in cost of approximately $785,000).
Alternative C – completes the backlog of deferred maintenance ($6.24 million), proposes many capital improvements ($43.1 million) construction, demolition, and rehabilitation projects, e.g., a new visitor center/headquarters facility and a centralized maintenance facility, and future planning studies ($2 million). This Alternative appears to require an additional $34.1 million more in expenditures than Alternative A, including an additional $1.0 million for annual operational costs, an increase of 11 full-time equivalent employees and 9 seasonal workers (an annual increase in cost of approximately $1,091,000).
Alternative D – completes the backlog of deferred maintenance ($6.24 million), implements a series of capital improvements ($21.6 million), provides for limited new development ($42 million) and future planning studies ($2 million). Emphasis is upon improving operations and maintenance efficiencies, protecting the resource, and enhancing the visitor experience through interpretive waysides, exhibits, education/ experience opportunities. This Alternative appears to require an additional $55.3 million more in expenditures than Alternative A, including an additional $0.9 million for annual operational costs, an increase of 12.5 full-time equivalent employees, two not to exceed one-year workers and one STEP (student temporary educational program) worker (an annual increase in cost of approximately $934,000).

***Environmental Impacts*:**

The DEIS describes environmental impacts qualitatively, e.g., *negligible* – no measurable or perceptible changes, *minor* - slight but detectable, and would result in small but **measurable** localized changes, *moderate* - readily apparent resulting in easily detectable localize changes, and *major* - severely adverse or exceptionally beneficial resulting in appreciable changes. However, the DEIS does not appear to provide the measurements (quantitative analysis) to supporting its qualitative designations. According to the DEIS, all alternatives appear to have short and long-term, negligible to moderate adverse impacts, and long-term beneficial impacts and lack substantiating environmental information supporting these impact determinations.

This GMP does provide for performance indicators and standards to help ensure desired conditions are being attained. For example it uses *priority resource* indicators: sea-grass and oyster reef impacts from boat activities, such as propeller scarring, vessel groundings and anchoring. Additionally, the CNS is described as having an ongoing sea-grass-bed baseline assessment.

***EPA Comments*:**

Visitor Dispersal Analysis Recommendations

Under the preferred alternative, the GMP calls for the dispersal of visitors to experience relatively undeveloped areas from the high use areas, e.g., *emphasis will be placed on encouraging visitors to experience relatively undeveloped areas*. The preferred alternative discussion indicates a need to restore disturbed areas (beaches) to natural conditions as the principle focus of resource management. The proposed solution as discussed in the preferred

alternative appears to be dilution. However, the proposed dilution's impacts upon the CNS do not appear to have been discussed, particularly in context of visitor wear and tear. Moreover the preferred alternative appears to be seeking to increase visitors, and thereby increasing the wear and tear upon the CNS without providing any "wear and tear" mitigation. Furthermore, the proposed GMP indicators do not appear to cover the typical non-boating visitor "wear and tear" upon the CNS.

The DEIS would benefit from more quantitative analysis: e.g., discuss the existing visitor-density per unit area and its resulting impacts. Such an analysis would allow the DEIS to estimate a prediction of how increasing the density of visitors in areas previously isolated from visitors might impact these CNS natural resources, e.g., wild life including sensitive species. For example, the wildlife may have adapted to the existing high visitor density areas by retreating to low density areas, the same ones to be opened up as the proposed "dissolution" solution.

Additionally, the DEIS's focus appears to be on the benefit to the vistors' experience quality. The DEIS should discuss how dispersing visitors will impact those visitors who (use to) know where to escape the crowd only to find the NPS has brought the crowd to them.

Consequently EPA recommends the GMP provide for more quantitative abilities to assess the environmental impacts of its preferred alternative regarding its visitor dispersal emphasis.

GMP Recommendations – ecosystem services

In the era of shrinking government finances which are reasonably foreseeable to continue shrinking, the EPA encourages the NPS to rethink and investigate its existing resource funding paradigm as part of the proposed GMP. There may be funding/resource opportunities for maintaining and protecting CNS resources in the form of partnerships with nongovernmental organizations and private sector investments. As part of this recommendation to facilitate this objective, the EPA suggests the NPS include an effort to quantify the CNS' ecosystem services, i.e., inventory and determine dollar valuations, in order to more accurately determine the benefit of conserving the CNS as compared to the costs of not conserving.

The *Ecosystem Services* concept was formally defined by the United Nations' 2004 Millennium Ecosystem Assessment (MEA), a four-year study involving more than 1,300 scientists worldwide. The MEA grouped ecosystem services into four broad categories: *provisioning*, such as the production of food and water; *regulating*, such as the control of climate and disease; *supporting*, such as nutrient cycles and crop pollination; and *cultural*, such as spiritual and recreational benefits.

Examples of ecosystems "services" include: moderating weather extremes and their impacts, dispersing seeds, mitigating drought and floods, protecting people from the sun's harmful ultraviolet rays, cycling and moving nutrients, protecting stream and river channels and coastal shores from erosion, detoxifying and decomposing wastes, controlling agricultural pests, maintaining biodiversity, generating and preserving soils and renewing their fertility,

contributing to climate stability, purifying the air and water, regulating disease-carrying organisms, and pollinating crops and natural vegetation.[1]

Further information and resources can be found …

1. US EPA's Ecosystem Services research at http://www.epa.gov/ecology/

2. US Forest Service's Ecosystems Services Project at http://www.ecosystemservicesproject.org/index.htm

3. Evaluation of Ecosystem Services of Coastal Habitats in the Gulf of Mexico: Mustang Island - study goals are to map and characterize habitats in a barrier-island system typical of Gulf coast areas; develop procedures and tools for identifying and assigning ecosystem services (ES) to habitats, and develop a scalable and transferable tool for valuing and mapping value of ES. See: http://www.harteresearchinstitute.org/ecosystem-services/174-ecosystem-services-projects

4. Natural Capital Project (NatCap) is a venture led by Stanford University, the University of Minnesota and two of the world's largest conservation organizations, the Nature Conservancy and the World Wildlife Fund. It aims to transform traditional conservation methods by including the value of "ecosystem services," which are currently not part of the traditional economic equation, in business, community and government decisions.

   Natural capital are the goods and services from nature which are essential for human life. When properly managed, ecosystems yield a flow of services vital to humanity, including the production of goods (e.g., food), life support processes (e.g., water purification), and life fulfilling conditions (e.g., beauty, recreation opportunities), and the conservation of options (e.g., genetic diversity for future use). Despite its importance, this natural capital is poorly understood, scarcely monitored, and, in many cases, undergoing rapid degradation and depletion.

   NatCap developed a software program called InVEST (Integrated Valuation of Ecosystem Services and Trade-offs) to map and value nature's goods and services essential for humans. The software, which is available as a free download, enables the comparison of various environmental scenarios. What is the real cost of draining a wetland or clearing a coastline of mangroves? InVEST models the trade-offs and helps decision makers better understand the implications of their choices. NatCap is now moving the InVEST software onto the Google Earth Engine platform. the new tool can map trends and allow scientists to forecast such things as soil fertility, erosion and deforestation. See: http://www.naturalcapitalproject.org/

[1] http://www.esa.org/education_diversity/pdfDocs/ecosystemservices.pdf

GMP Recommendations – ecosystem services – climate change

The DEIS states *While the major drivers of climate change are outside the control of the National Park Service but climate change is a phenomenon whose impacts are occurring or are expected in Canaveral National Seashore in the time frame of this management plan.*

As part of the GMP, the EPA encourages the NPS to explore whether the CNS provides ecosystem services that can ameliorate climate change impacts. For example, the economic value of carbon sequestration potential represented by the CNS.

Additionally because Florida has been hard hit by hurricanes, the number of troubled property and casualty insurers in Florida has increased, according to Jupiter-based Weiss Ratings. After analyzing the financial condition of the insurers in Florida as of midyear, Weiss Ratings gave 35 of them a rating of D or F. That's up from 29 with poor grades on Dec. 31, 2010. Consequently another economic benefit afforded by the existence of CNS is it prevents new development requiring expensive insurance (or risking insolvent insurers) and storm repair plus it provides a buffer against hurricanes for existing inland developments.

GMP Recommendations – ecosystem services – wetlands mitigation

As part of the GMP, the EPA encourages the NPS to explore whether its wetlands restoration efforts can be enhanced by participation in a wetlands mitigation bank through it existing interagency agreements and/or through partnerships with NGOs (e.g., The Nature Conservancy), the US Army Corps of Engineers, etc. A mitigation bank is a wetland, stream, or other aquatic resource area that has been restored, established, enhanced, or (in certain circumstances) preserved for the purpose of providing compensation for unavoidable impacts to aquatic resources permitted under Section 404 or a similar state or local wetland regulation. See: http://www.epa.gov/owow/wetlands/facts/fact16.html Assistance with exploring whether the Wetlands Mitigation Banking concept could enhance CNS wetlands restoration efforts, Eric Somerville of Region 4 EPA's staff is available. Mr. Somerville can be reached by phone: 706-355-8514 or email: Somerville.eric@epa.gov .

Conclusion

Thank you for the opportunity to review this DEIS. If you wish to discuss this matter further, please contact Beth Walls (404-562-8309 or walls.beth@epa.gov) of my staff.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION [1]

Environmental Impact of the Action

LO-Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS sate, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1-Adequate
The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alterative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information
The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant

[1] From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment.